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Western bean cutworms in western Iowa

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Abstract
The western bean cutworm is a mid-season pest of field corn that is rarely see in Iowa. In 2000, some fields in northwestern Iowa suffered economic yield loss. One field in Holstein, Ida County, had approximately 95 percent of the ears heavily damaged from the larvae. Kernels in the ear tips, plus along the side of the ear, were destroyed. In addition, many plants were invaded by ear molds, which reduced the quality of the yield at harvest. This year, Joel DeJong, extension field specialist in crops, has trapped adult moths in Cherokee and Woodbury counties.

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The western bean cutworm has been a regular pest in Nebraska and the following information was taken from University of Nebraska entomologists Bob Wright and Ron Seymour. It explains the biology of this insect and suggestions for scouting and economic thresholds.

Females lay eggs on corn or dry edible field bean leaves. Cornfields in the late-whorl stage are most attractive to the females for egg laying. Eggs are laid in masses of 5 to 200, usually on the upper surface of the top leaves. The eggs are about the size of a pinhead. When first laid, the eggs are white. As the eggs develop they turn tan and then purple just before the larvae hatch. Newly hatched larvae are approximately 1/4 inch in length and are dark brown. Young larvae are tan with a darker, faint diamond-shaped pattern on their backs. As the larvae mature, they become a pinkish tan or pale brown and reach a body length of 1 1/2 inches. When the larvae hatch, they first feed on pollen and then move to the corn ears. The larvae feed there for several weeks before they drop to the soil to form a subterranean overwintering chamber. By the end of the five instars, considerable feeding damage can occur. In corn, one larva per plant usually does not cause severe damage but the ears may contain up to 10 larvae, which can substantially reduce yield, because western bean cutworms are not cannibalistic, compared with corn earworms.

Corn damaged by western bean cutworm.

Enlarge [1]

Start scouting for the western bean cutworm with the beginning of moth flight in mid-July. In corn check 20 consecutive plants at five locations. **If 8 percent of the plants have an egg mass or young larvae are found in the tassel, consider applying an insecticide.** Timing

of the application is critical. If the tassel has not emerged when the larvae hatch they will move into the whorl and feed on the developing pollen grains in the tassel. As the tassel emerges, the larvae will move down the plant to the green silks and then into the silk channel to feed on the developing ear.

Once the larvae reach the ear tip, control is difficult. If an insecticide is needed, time the application so that 90-95 percent tassel emergence has occurred. If the tassels have already emerged, the application should be timed for when 70-90 percent of the larvae have hatched. If an insecticide application is needed, cornfields should be checked for the presence of spider mite colonies. If mites are found, select a product that does not stimulate mite reproduction. Products that contain permethrin (Pounce, Ambush) or esfenvalerate (Asana) have been associated with increased mite reproduction. Other products labeled for western bean cutworm control on corn include Capture 2EC, Sevin XLR Plus, Lorsban 4E, Penncap-M, and Warrior 1EC.

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